# GRUNDIG

## Video Recorder

VHS
PAL

# VS 200 RC
# VS 220 RC
# VS 201 RC
# VS 226 RC

*Operating Instructions.*

## Please note

**This instruction book assumes that the recorder has been set up and fully installed by your dealer.**

**If you set up and connect the recorder yourself at any time you should first read pages 44–47.**

**Important**

- **The ventilation holes in the base of the recorder and the ventilation slots in the upper part of the cabinet must be kept free.**
- **The recorder and the cassettes should not be set up in the immediate vicinity of a source of heat or in direct sunlight.**
- **The recorder and the cassettes must not be exposed to moisture, or to sharp changes in temperature such as may occur when the recorder or the cassette is taken from a cold to a warm area, which can lead to condensation (so-called "sweating"). If condensation does, however, occur, switch on your recorder and allow it to stand for at least 2 hours without a cassette in it.**
- **The minimum distance between the recorder and the TV set should be about 20 cm.**

## Brief Guide to Controls

① **Buttons 1-0**
For keying in time of day, automatic record switch-on and switch-off times, date, TV station number, channel number, total playing time of cassette, GO-TO time and numbers for locating a certain point on the cassette.

② **RECORD Button**

③ **Display**
Shows time of day, date, data of cassette and GO-TO time, tape length counter, and "F" if entry is illogical.
Other symbols in the display indicate the type of operation selected.

④ **▮▮ (Freeze-frame, Frame advance) Button**
When button ④ is pressed during playback a stationary picture appears on the TV screen.

⑤ **Playback Button ▸**

⑥ **Automatic Button (AUTOM.)**
For switching recorder to standby for automatic recording (see page 38).

⑦ **Picture Search Button**
(reverse)

⑧ **Picture Search Button**
(forward)

⑨ **Cassette Compartment**

⑱ **On/Off Button ●⏻**
To switch on press button in (button remains in).
To switch off release button by pressing it again (the built-in aerial amplifier will continue to operate, ie: the recorder is **not isolated from the mains).**

⑲ **FINE TUNING Buttons –, +**
For fine tuning the TV stations entered in the memory (see p. 46/47).

⑳ **Station Selection Buttons –, + (PROGRAMME)**
For selecting and stepping through the station memory positions.
For selecting VCR channel (see p. 46/47).

㉑ **STORE Button**
For entering the station and the fine-tuning value in the memory. Also for special functions and electronic combination lock.

㉒ **STATION SEARCH/DATE Button**
**Station search:** For starting automatic tuning of TV stations by the recorder (channels 0-99).
**Date:** For displaying and setting date.

㉓ **CLOCK Button**
For starting the clock and displaying time and date.

㉘ **GO-TO Button**
**GO-TO mode by entering a time**
(GO-TO time)
The cassette must be provided with a code label or the total playing time of the cassette must be entered.
Enter the required tape time as three figures in hours and minutes with the numbered buttons ① (eg: 130=1 hour 30 mins.) and then press the **GO-TO** button.

**GO-TO mode by entering a number with uncoded cassettes**
(the number corresponds to a certain tape position).
Enter the required tape position as three figures with the buttons ① (eg: 656) and then press the GO-TO button ㉘.
**When the number or the tape position is reached** the recorder will switch to playback.

㉙ **0-SET Button**
Sets the counter to 000.

㉚ **Time Left Button**
For checking the amount of playing time left on the cassette in the recorder. The cassette must be provided with a code label or the total playing time of the cassette must be entered.

㉛ **NORM Button**
(no function)

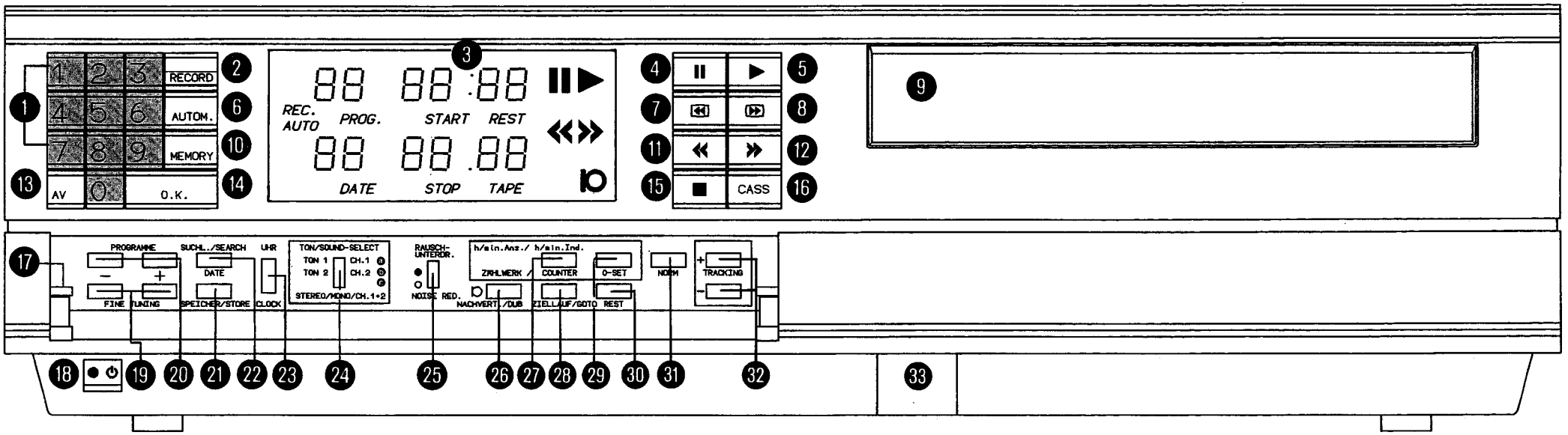



**Bild zeigt die Stereo-Ausführung.** **Picture shows the stereo version.**

- **On no account should you try to open the video recorder yourself as the manufacturer does not accept any liability for any damage which may result.**

⑩ **Preselect Memories Button (MEMORY)**
For selecting the total of 7 automatic clock recording memory positions individually.

⑪ **Rewind Button <<**

⑫ **Fast Forward Wind Button >>**

⑬ **AV Button (Audio-Video)**
For recording at video frequency via the AV socket.

⑭ **O.K. Button**
For entering the individual preselection data for automatic clock recording.

⑮ **Stop Button ■**
Terminates all functions, except clock-controlled recording. Data for total playing time of cassette are retained (see page 3).

⑯ **Eject Button (CASS.)**
Terminates all functions, except clock-controlled recording. The cassette compartment is automatically raised and the cassette ejected. Data for total playing time of cassette are cancelled.

⑰ **Flap**
To gain access to controls ⑲-㉜, open the flap by moving it in the direction of the arrow.

㉔ **SOUND-SELECT Switch***
In the case of TV broadcasts with stereo sound or two-channel sound this switch must be moved to the ⓒ position (see p. 35) before recording starts, and for playback of two-channel sound recordings to the ⓐ or ⓑ position before playback starts.

㉕ **Noise Reduction Switch***
To suppress tape noise, set this switch to the ● position during record and playback.
If the sound is dull when playing back a cassette made on another recorder, set the switch to the O position.

㉖ **Dubbing Button***
1. For simultaneous dubbing during recording.
2. For subsequent dubbing during playback.

㉗ **Time used/COUNTER Button**
For switching from tape length counter to hours/minutes indication and vice versa.
(Hours/minutes indication only after the total playing time of the cassette has been entered, see p. 31, or if the cassette is provided with a code label, see p. 30).

㉜ **TRACKING Buttons +, –**
Tracking correction. For improving the picture quality during playback of recordings made on other recorders.

㉝ **Infrared-eye of the remote control receiver.**

**Back of Recorder:**
(Fig. on page 45).

㉞ **Remote Control Socket**

㉟ **AV Socket**

㊱ **Microphone Socket***

㊲ **Aerial input socket**

㊳ **Aerial Output Socket**

㊴ **Channel Adjustment Control**

*stereo recorders only

## System and Cassette

This video recorder employs the VHS system.

It can record and play back TV broadcasts with mono, stereo* and two-channel sound* (stereo-sound playback is only possible with a stereo-sound TV set or a stereo hifi system*).

Subscribers to cable TV systems can receive and record additional programmes.

The recorder can be preprogrammed to record automatically

- seven different programmes
- at seven different times
- on seven different days.

You can add your own commentary while a programme is being recorded or at a later date*.

All cassette recordings can be played back on this and other machines using the VHS system, ie: cassettes within this system are **fully compatible.**

Cassettes with playing times from 30 (E-30) to 240 (E-240) minutes are available from dealers.

Each of your own VHS cassettes should be coded according to the playing time with one of the labels supplied (see Fig.). Code labels are also available at your dealer.

* applies only to stereo machines

When a coded cassette is put in the recorder, the display ③ will show the cassette type,

**05 for E 30**
**C1 for E 60**
**C2 for E120**
**C3 for E180**
**C4 for E240**

along with the playing time used in hours and minutes.

The total playing time of some cassettes differs from the standard (eg: 110 mins., 195 mins.).

Such playing times can neither be entered by a code label nor by hand.

If such cassettes are employed the tape counter reading should be used for orientation.

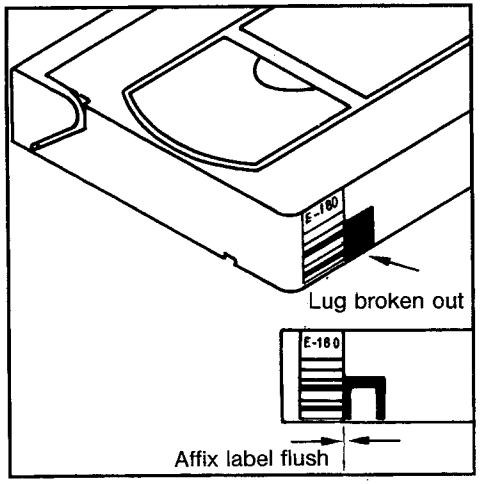
Cassettes should always be stored in their containers.

**Erase Prevention**

VHF cassettes can be erased and re-recorded at any time.

Whenever a recording is made on a cassette, any recording already on the tape will automatically be erased.

To prevent recordings being accidentally erased or new recordings inadvertently being made on old ones, the cassettes can be protected against erasure by breaking out the lug (see Fig.).




## PAL/SECAM Reception

If this recorder has been fitted with a PAL/SECAM module, you will be able to **record** and **play back TV broadcasts** according to the **PAL system** and the **SECAM system in colour.**

For playback the **colour TV set must also be fitted** with an appropriate PAL/SECAM module.

**Consult your dealer!**

## Entering the Total Playing Time of the Cassette

If the total playing time of the cassette deviates from the standard, the cassette **cannot be coded** or the total playing time **cannot be entered.**

If a cassette "of another make" without a code label (with total playing time **not deviating from the standard**) is used, you can enter its total playing **time in minutes** with the buttons ①.

| Procedure | Indication in Display ③ | Remarks |
|---|---|---|
| Put cassette in cassette compartment with label (writing readable) uppermost. | ⇨ Clock time, any number of tape length counter, TAPE. | ⇨ Cassette compartment will be lowered.<br>Blinking of F and any number in the display indicates a fault which may often be remedied by pressing the eject button ⑯ and changing the cassette. Also observe the notes on positioning on page 28.<br>If this does not help, consult your dealer and inform him on which of the indications is blinking. |
| Entry for E-30 cassette:<br>Press numbered buttons 0, 3, 0 ①. | ⇨ 0:30 | |
| Entry for E-240 cassette:<br>Press buttons 2, 4, 0 ①. | ⇨ 2:40 | |
| Open flap ⑰. | | |
| Verify entry with button ㉗. | ⇨ Clock time, total playing time of cassette, playing time used on cassette, TAPE. | |

## Playback

Select AV (VCR) position on TV set.
Provide cassette with code label or...

enter total playing time of cassette in recorder.

## Procedure

Set switch ㉔ to correspond to recording (set to ⓐ, ⓑ or ⓒ).

➪ Start playback by pressing button ⑤.

To interrupt playback for a short time (pause function) press button ④.
To restart playback press button ⑤ again.

To stop playback, press button ⑮.

To remove cassette press button ⑯.

## Indication in Display ③

➪ Clock time, total playing time of cassette, playing time used on cassette, TAPE, ▶.

➪ Clock time, total playing time of cassette, playing time used on cassette, TAPE, ▮▮, ▶.

➪ Clock time, total playing time of cassette, playing time used on cassette, TAPE.

➪ Clock time, CASS.

## Remarks

Two-channel sound recordings can only be played back with stereo recorders.

➪ If the picture on the screen jumps or rolls when playing back **cassettes recorded on a different recorder**, please read the section entitled "Other Facilities" on **page 49 first.**

If required, the picture quality of recordings made on other recorders may be improved with buttons ㉜ (+ and –).

➪ see also freeze frame

➪ If the end of tape is reached, the tape will automatically be rewound to the beginning.

## Freeze Frame, Frame Advance

When the pause/freeze frame function is selected, interference stripes appear on the screen.

### Procedure

The picture can be advanced one frame at a time by repeatedly pressing button ④ to enable a particular scene to be selected (frame advance).
To cancel the pause/freeze frame function, press button ⑤.

### Indication in Display ③

⇨ Clock time, total playing time of cassette, playing time of cassette, TAPE, ▮▮, ▸.

### Remarks

⇨ The duration of the freeze frame function is limited to approx. 15 mins. After that time has elapsed the recorder automatically switches to stop. To prevent tape wear on freeze frame operation, the tape is moved on at short intervals.

## Fast Rewind/Forward Wind

For rapidly winding the tape.

### Procedure

Press button ⑪ or button ⑫.

### Indication in Display ③

⇨ Clock time, total playing time of cassette, playing time used on cassette, TAPE, ≪ or ≫.

### Remarks

⇨ Once the end or the beginning of the tape is reached, the recorder automatically switches to stop.

## Picture Search

For "thumbing through" a recording at approx. 7 times playback speed.

### Procedure

For picture search forwards, press button ⑧.

For picture search reverse, press button ⑦.

### Indication in Display ③

⇨ Clock time, total playing time of cassette, playing time used on cassette, TAPE, ≫, ▸.

⇨ Clock time, total playing time of cassette, playing time used on cassette, TAPE, ≪, ▸.

### Remarks

⇨ Picture search is limited to 10 mins. After that time has elapsed the recorder switches to stop.
If the end of the tape is reached before this time has elapsed, the tape will automatically be rewound to the beginning.

## GO-TO

To wind tape forwards or backwards to a certain position.

**GO-TO mode by entering a time** (GO-TO time).

For this, the cassette must be provided with a code label or the total playing time of the cassette entered in the recorder.

| Procedure | Indication in Display ③ | Remarks |
|---|---|---|
| Enter required tape position as three figures in hours and minutes.<br>**Examples:**<br>Required tape position 48 minutes: press buttons 0, 4, 8 ①.<br>Required tape position 90 minutes: press buttons 1, 3, 0 ①. | ⇨ GO-TO time (0:48 or 1:30). | |
| Open flap ⑰. | | |
| Press button ㉘. | ⇨ GO-TO time, total playing time of cassette, playing time used on cassette, TAPE, << or >>. | ⇨ Once the required tape position is reached, the recorder switches to playback. |

**GO-TO mode by entering a number**

Only if cassette is not coded or cassette data have not been entered (the number corresponds to a certain tape position).

| | | |
|---|---|---|
| Rewind tape to beginning by pressing button ⑪. | ⇨ Clock time, rolling numbers on tape position counter, TAPE, <<. | ⇨ At the beginning of the tape, the recorder sets the tape position counter to 000. |
| Enter required number for certain tape position as three figures. | ⇨ Clock time, 000, TAPE. | ⇨ at beginning of tape |
| **Examples:**<br>Tape position 938, press buttons 9, 3, 8 ①.<br>Tape position 42, press buttons 0, 4, 2, ①.<br>Then press button ㉘. | ⇨ 9:38 or 0:42, 000, TAPE, >>. | ⇨ Once the number or the tape position is reached, the recorder switches to playback. |

## Recording (Manual)

Provide cassette with code label or enter total playing time of cassette in recorder.

The recorder* can receive stereo and two-channel-sound TV broadcast and record both channels at the same time.

*applies only to stereo recorders

| Procedure | Indication in Display ③ | Remarks |
|---|---|---|
| Insert cassette with sufficient playing time on tape with label uppermost (observe »Erase Prevention«). | ⇨ Clock time, total playing time of cassette, playing time used on cassette, TAPE. | ⇨ On certain TV sets, you can watch the programme being recorded by selecting the AV (VCR) position on the TV set. |
| Set switch ㉔ to position Ⓒ *. | ⇨ | ⇨ * Applies only to stereo recorders. |
| Key in station memory number, eg: for the 2nd station position press numbered button 2 ①, and then press button ②. | ⇨ REC., station memory number (eg: 2), clock time, total playing time of cassette, playing time used on cassette, TAPE. | |
| To interrupt the recording for a short time, press button ④. | ⇨ REC., station memory number, clock time, total playing time of cassette, playing time used on cassette, TAPE, ▮▮. | |
| To restart recording press button ④ again. | ⇨ REC., station memory number (eg: 2), clock time, total playing time and time used on cassette, TAPE. | |
| To stop recording press button ⑮. | ⇨ Clock time, total playing time of cassette, playing time used on cassette, TAPE. | ⇨ If the end of tape is reached, the tape will automatically be rewound to the beginning. |
| To rewind tape press button ⑪. | ⇨ Clock time, total playing time of cassette, playing time used on cassette, TAPE, ◀◀. | |
| To remove cassette press button ⑯. | ⇨ Clock time, CASS. | |

**Gapless Joining of Recordings**

- Locate the point on the tape where you wish to start the new recording by playing back the tape, then stop the tape by pressing button ④.
- Select record. The electronic system in the recorder then winds the tape back several centimetres, and the starting point is precisely fixed by scanning the recording already on the tape.
- This is the point where the new recording starts, and you will therefore have a smooth transition from on recording to the next. This is called assembly (back-space) editing.

## Automatically Stopping Recordings Started Manually by Programming in the Switch-off Time

| Procedure | Indication in Display ③ | Remarks |
|---|---|---|
| Press button ⑩. | ⇨ REC., station position number, START time = clock time, DATE, today's date, »STOP« flashes. | |
| Key in switch-off time (STOP time), eg: 21:00 hours. | | |
| Press buttons 2, 1, 0, 0 ①. | ⇨ REC., station position number, START time = clock time (eg: 19:20 hours), DATE, today's date, switch-off time = STOP time (eg: 21:00 hours), »STOP« flashes. | |
| Press button ⑭. | ⇨ REC., REST,<br>after approx. 30 sec.:<br>REC., station position number, clock time, total playing time of cassette, playing time used on cassette, TAPE. | ⇨ REST means the time left for further programming.<br>Recorder will automatically switch to stop at switch-off time chosen. |

## Automatic Recordings (Clock Recordings)

**Example 1:**

**Automatic clock recording to be made later the same day from 20:15 hours to 22:00 hours, station memory number 3.**

| Procedure | Indication in Display ③ | Remarks |
|---|---|---|
| Insert cassette with sufficient playing time on tape (observe »Erase Prevention«). | ⇨ Clock time, total playing time of cassette, playing time used on cassette, TAPE. | |
| For stereo or two-channel-sound broadcasts set switch ㉔ to position Ⓒ.* | ⇨ | ⇨ * applies only to stereo recorders |

If the cassette is without code label, its total playing time may be entered.

| | | |
|---|---|---|
| Press button ⑩ until only PROG. flashes. | ⇨ »PROG.« flashes. | |
| Key in required station memory number (in this example 3).<br>Press button 3 ① and button ⑭. | ⇨ 3, PROG., »START« flashes. | |
| Key in switch-on (= START) time (in this example 20:15 hours).<br>Press buttons 2, 0, 1, 5 ① and button ⑭. | ⇨ 3, PROG., START time, today's date, »DATE« flashes. | |
| Press button ⑭. | ⇨ 3, PROG., START time (20:15), day indication for today, (month indication goes out), »STOP« flashes. | ⇨ For recordings to be made the same day there is no need to change the date displayed. |
| Key in switch-off (= STOP) time (in this example 22:00 hours).<br>Press buttons 2, 2, 0, 0 ① and button ⑭. | ⇨ AUTO, REST,<br>display then shows:<br>AUTO, 3, PROG., START time, DATE, STOP time. | ⇨ REST means the time left for further programming. »FULL« will appear in the display if the programmed recording exceeds the lenth of the cassette. If the end of the tape is reached, the tape will automatically be rewound to the beginning. |

| | |
|---|---|
| **Erasing a Complete Preprogramming Memory Entry**<br>Press button ⑩ once or repeatedly until the data of the preprogramming memory to be erased appears in the display. | Press 0 button ①.<br>Press button ⑩.<br>The memory is erased and the next memory is brought forward. The free memory is now available for new data to be entered. |

**Example 2:**

**Automatic recording to be made today or at a later date from 23:00 hours to 0:45 hours, station memory number 2.**

**Programming Clock Recordings in Leap Years**

The clock does not take account of leap years. We therefore suggest that on the 1st March in a leap year (date reading 2.03) you reset the date. If you wish to programme a clock recording in advance for the 29th February, you will have to enter the date as 1.03. Similarly, to preprogramme an automatic recording for 1st March if you have already programmed one for the 29th February, you will have to enter the date as 2.03. If you are going to be away from home during this period and wish to make clock recordings on subsequent days, a date one day ahead of the actual date will likewise have to be entered, eg: 3.03 for 2.03, 4.03 for 3.03 etc. If you have no clock recordings programmed for the 1st March, you may of course, reset the clock on that day.

| Procedure | Indication in Display ③ | Remarks |
|---|---|---|
| Press button ⑩ until only »PROG.« flashes. | ⇨ AUTO, »PROG.« flashes. | |
| Key in required station memory number (in this example 2).<br>Press button 2 ① and button ⑭. | ⇨ AUTO, 2, PROG., »START« flashes. | |
| Key in switch-on (= START) time (in this example 23:00 hours).<br>Press buttons 2, 3, 0, 0 ① and button ⑭. | ⇨ AUTO, 2, START time (23:00), today's date, »DATE« flashes. | ⇨ Observe summer/winter time. Resetting the clock, see page 48. |
| Key in date of recording (eg: 26th April)<br>Press buttons 2, 6, 0, 4 ① and button ⑭. | ⇨ AUTO, 2, PROG., 23:00, START, 26, DATE, »STOP« flashes. | ⇨ The number for the month in the date goes out, and only the number for the day is displayed. |
| Key in switch-off (= STOP) time (in this example 0:45 hours).<br>Press buttons 0, 4, 5 ① and button ⑭. | ⇨ AUTO, REST.<br>after approx. 2 secs., the preprogrammed data from example 1, see pages 36 and 37. | ⇨ Time left for programming. »FULL« will appear in the display if the programmed recording exceeds the length of the cassette. If the end of the tape is reached, the tape will automatically be rewound to the beginning. The recorder is now on standby to make automatic recordings (examples 1 and 2) at the preprogrammed times and all the other functions are automatically locked. |

A total of 7 memories can be programmed.
Always start with button ⑩ until only »PROG.« flashes.
After all the data have been entered, the recorder sorts the preprogrammed data into chronological order.
If you wish to use the recorder in between programming and the start of recording, proceed as follows: Press button ⑥ and carry out the desired function (eg: playback). Then put a cassette with sufficient playing time on the tape in the recorder. Press button ⑥ and the automatic recordings will start at the preprogrammed times.

All the data entered are retained if there is a mains failure for at least 12 months.
If there is a mains failure, any recording being made at the time is automatically continued (if recording time is still left) when the power is restored.

**Example 3:**

**Automatic recording to be made at the same time every day.**
**News broadcast on station allocated to station memory number 1 from 22:30-23:00 hours.**

(called »Every-Day-Mode«)

This recording mode blocks all other preprogramming memories. Data entered are retained.

The recorder records the programme at the same time every day until the tape is full.

At the end of the tape the recorder cancels this recording mode, thus releasing all previously entered data and winds the tape to the beginning.

| Procedure | Indication in Display ③ | Remarks |
|---|---|---|
| Insert cassette with sufficient playing time (observe »Erase Prevention«). | ⇨ Clock time, total playing time of cassette, playing time used on cassette, TAPE. | |
| Repeatedly press button ⑩ until only »PROG.« flashes. | ⇨ »PROG.« flashes. | |
| Key in required station memory number (in this example 1).<br>Press button 1 ① and button ⑭. | ⇨ 1, PROG., »START« flashes. | |
| Key in switch-on (= START) time (in this example 22:30 hours).<br>Press buttons 2, 2, 3, 0 and button ⑭. | ⇨ 1, PROG., 22:30, START, today's date, »DATE« flashes. | |
| Press button 0 ① and button ⑭. | ⇨ 1, PROG., 22:30, START, 0, DATE, »STOP« flashes. | |
| Key in switch-off (= STOP) time (in this example 23:00 hours).<br>Press buttons 2, 3, 0, 0 ① and button ⑭. | ⇨ AUTO, REST.<br>Then:<br>AUTO, 1, PROG., START time, 0, DATE, STOP time. | ⇨ Time left on cassette. |

# Copying Cassettes
# Recording from Other Picture and Sound Sources

**AV Recording from TV Set (Fig. 1)**

Plug the aerial cable into the aerial socket on the TV set.

Plug the video cable (AV cable) into the AV socket on the TV set and the socket ㉟ on the video recorder.

Select the desired station on the TV set. Set switch ㉔ to position Ⓒ *. Press button ⑬ on the recorder and then press button ②.

The picture and sound will now be recorded.

If you do not have a stereo TV set, the stereo recorder* will record the sound from a stereo or two-channel-sound TV broadcast in mono.

**The Stereo Recorder as a Stereo-Sound Receiver***

The stereo receiver section of the recorder makes it possible for you to listen to the sound of a stereo-sound TV broadcast in stereo even without a TV set. To do this the stereo sound signal from the recorder must be fed to a stereo hifi system (in the E-E-mode) using a hifi adapter. The stereo system will receive the stereo sound

Press buttons ⑳ (+ or —) until the station memory number for the required station appears in the display ③.

Make the necessary adjustments to the stereo hifi system.

The stereo sound will be heard over the stereo hifi system.

**Copying Cassettes**

**1. HF Copying (Fig. 2)**

If this method is used for copying cassettes with stereo sound* or two-channel sound*, the sound on the copy will only be in **mono**.

Proceed as follows:
Connect socket ㊳ of **recorder A which is to be used for recording** to the aerial socket ⎓ of the TV set (the TV set is used as a monitor).

Connect socket ㊲ of **recorder A** to socket ㊳ of **recorder W which is to be used for playback**.

In the same way as your colour TV set had to be tuned to the recorder as described on page 46, the **recorder A** has to be tuned to the output channel of **recorder W**.

Select an unallocated station memory (eg: 29) on **recorder A** by repeatedly pressing buttons ⑳ (+ or —). Now press button ㉒ until the picture from **recorder W** appears on the TV screen. The buttons ⑲ (+ and —) can be used to obtain a »harder« or »softer« picture respectively. If you get interference on your screen (**patterning** or **wavy lines**) the output channel of **recorder W** must be altered (see page 46).

Now press button ㉑ on **recorder A**. Stop **recorder W** and rewind the cassette to be copied to the beginning or to the required point on the tape.

Put a cassette with sufficient playing time on the tape in the cassette compartment of **recorder A**.

Press buttons 2, 9 ① (station memory 29) and then button ② on **recorder A**.

Press the playback button on **recorder W**.

**2. AV Copying (Fig. 3)**

This method **is suitable** for copying cassettes **with stereo and two-channel sound***.
**Both recorders** must be stereo recorders.
To make AV copies you will need the video cable (AV cable).
Proceed as follows:
Connect socket ㊳ of the **recording recorder A** to the aerial socket of the TV set (the TV set acts as a monitor).
Plug the video cable into sockets ㉟ of **both recorders**.
Switch on the TV set and select the AV (VCR) position. Set switches ㉔ on both recorders to Ⓒ *.
Load the cassette to be copied in **playback recorder W** and wind it to the start of the tape or to the required position on the tape.
Put a cassette with sufficient playing time on the tape into **recorder A**.
Press the playback button on **recorder W.**
Press button ⑬ **on recorder A** and then button ②.
**Recorder A** will record the picture and sound from **recorder W**.

AV copying gives better picture and sound quality.

* applies only to stereo recorders

directly, ie: without it first being recorded by the recorder.

Proceed as follows:

Plug the aerial cable into socket ㊲ on the recorder.

Connect the recorder and the stereo hifi system using the hifi adapter (see fitting instructions for hifi adapter).

Switch on the TV set and select the AV (VCR) position.

Insert the **cassette to be copied** in **recorder W** (which is to be used for playback), set switch ㉔ to position ⓐ or ⓑ * and press the playback button.

**Fig. 1**

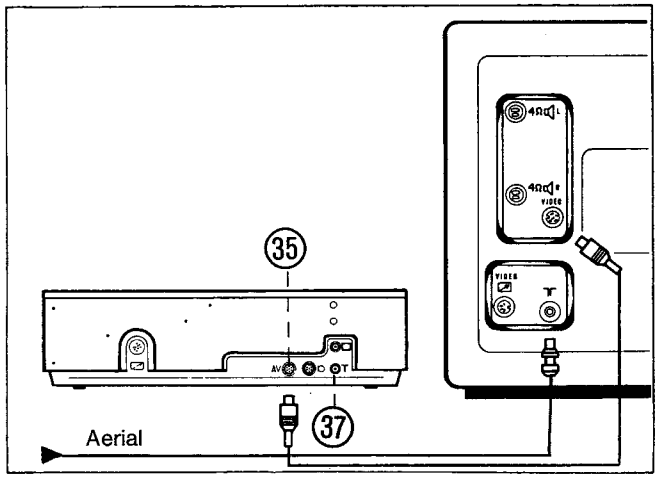



**Fig. 2**

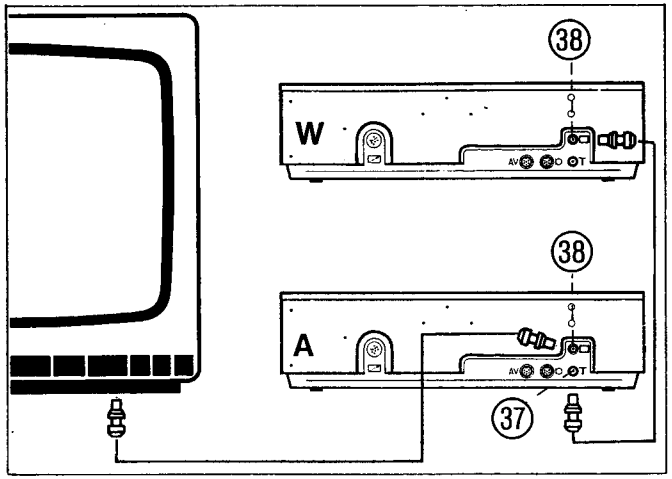
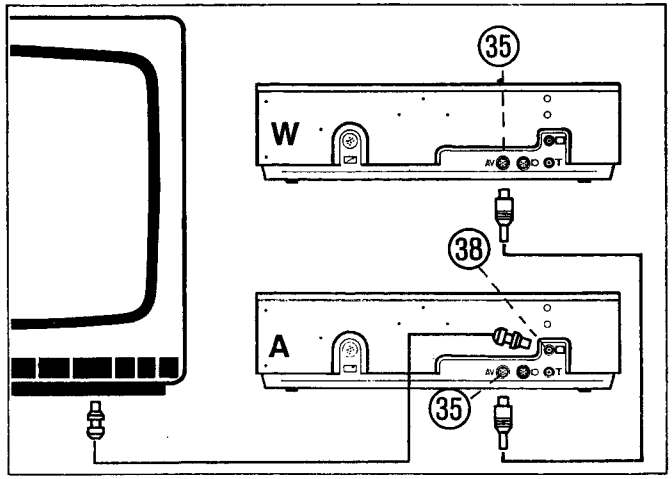



**Fig. 3**



# Recording from a Video Camera

**1. Video Camera with HF Output (Fig. 1)**

Plug the HF output cable from the camera (or camera power supply unit) into socket ㊲ on the recorder in place of the aerial cable.

Direct the camera at the subject, switch it on and make the necessary adjustments to it.

Switch on the TV set and select the AV (VCR) setting (the TV set acts as a monitor).

Select an unallocated station memory (eg: 29) by pressing buttons ⑳ (+ or –).

Press button ㉒ on the recorder repeatedly until a satisfactory picture of the scene to be filmed appears on the TV screen.

The buttons ⑲ (+ and –) can be used to obtain a "harder" or "softer" picture respectively.

Now press button ㉑.

Put a cassette in the cassette compartment.

Press buttons 2, 9 ① (for programme memory 29) and then button ②.

The picture and sound signal from the camera will now be recorded.

**2. Camera with AV Output (Fig. 2)**

Plug the AV cable from the camera into socket ㉟ on the recorder. Cameras with other connecting plugs must be connected via an adapter.

Direct the camera at the subject, switch it on and make the necessary adjustments to it.

Switch on the TV set and select the AV (VCR) position (TV set is used as a monitor).

Put a cassette in the cassette compartment.

Press button ⑬ and then button ②.

The picture and sound signal from the camera will now be recorded.

# Recording from a Microphone or Other Sound Sources

**1. Adding a Simultaneous Sound Track* (Fig. 3)**

At the same time as a picture is being made (eg: from a camera or when a holiday film is being copied) a sound track (mono or stereo) from an external sound track (radio, cassette player, microphone, record player) can be added.

**Proceed as follows:**

Connect the sound source to socket ㊱ on the recorder. For **mono sound sources**, an adapter plug may be **required** (available at dealers).

This is necessary if **only the sound from one loudspeaker** of the stereo TV set is heard **when playing back a test recording.**

Turn down the volume of the TV set.

Set switch ㉔ to Ⓒ.

Press required programme button ①. Press button ②, then button ④.

**Press** button ㉖ **and hold it in,** then press button ② again (IO appears in display ③).

Press button ④ again to start **simultaneous** sound recording.

To switch off the sound from the sound source connected:

**Press** button ㉖ **and hold it in,** then press button ② (IO in display ③ disappears).

**2. Dubbing at a Later Date***

Sound tracks (mono or stereo) consisting of commentary or music can be **subsequently** added to recordings on cassette.

**Both sound tracks** on the video tape are erased and replaced by the new sound recording.

**Proceed as follows:**

Connect the sound source to socket ㊱ on the recorder.

For **mono sound sources**, an adapter plug may be **required** (available at dealers).

This is necessary if **only the sound from one loudspeaker** of the stereo TV set is heard **when playing back a test recording.**

Turn down the volume of the TV set.

Set switch ㉔ to Ⓒ.

Press button ⑤, then button ④.

**Press** button ㉖ **and hold it in,** then press button ② again (IO appears in display ③).

Press button ⑤ again to start **adding** the sound to the picture recording.

To switch off the sound from the sound source connected:

**Press** button ㉖ **and hold it in,** then press button ② (IO in display ③ disappears).

* only possible with stereo recorders

Fig. 1

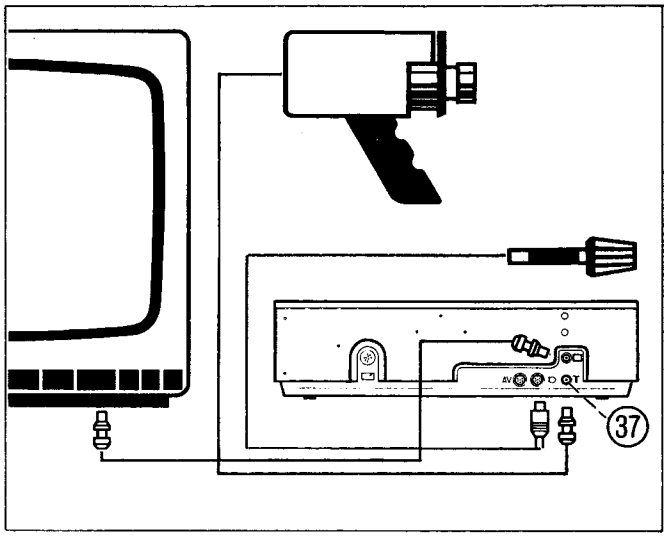



Fig. 2

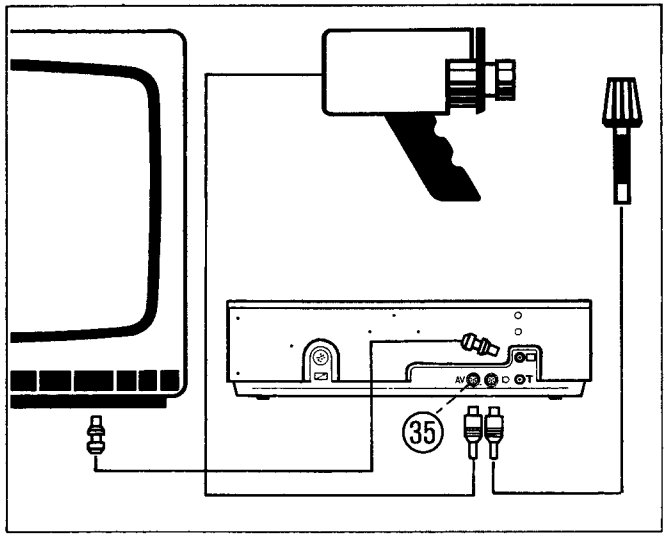
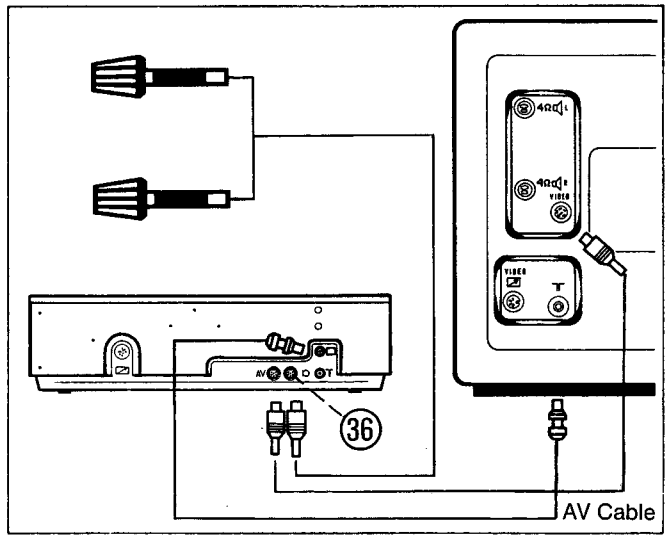



Fig. 3



# Connection and Preparation for Use

(If not carried out by dealer)

### Setting Up

If you wish to set the recorder and connect it yourself, you should observe the following points:

- The recorder should be stood on a flat, solid and horizontal surface.
- The recorder should be set up so that the ventilation holes in the base and the ventilation slots in the upper part of the cabinet are not obstructed.
- The recorder or the cassettes should not be set up in the immediate vicinity of a source of heat or in direct sunlight.
- The recorder or the tape must not be exposed to moisture, or to sharp changes in temperature such as may occur when the recorder or the cassette is taken from a cold to a warm area, which can lead to condensation (so-called "sweating").
  **If condensation does, however, occur, switch on the recorder and allow it to stand for at least 2 hours without a cassette in it.**
- **The distance between the recorder and the TV set should be about 20 cm.**

### Aerial Connection

The recorder has its own tuner and stereo-sound decoder* so that it can record TV broadcast **independently** of your TV set in mono, two-channel sound* or stereo*. It must therefore be connected directly to the aerial.

Unplug the aerial from the aerial socket of your TV set and insert it in socket ㊲ (aerial input-plug type A) on the recorder (see diagram).

### Connection to TV Set

The TV set should now be connected to the recorder. Use the aerial connecting cable supplied to connect socket ㊳ on the video recorder (plug type B) to the aerial socket on the TV set (plug type A).

### Connection to Mains

The recorder is designed to operate from a mains voltage of 220V, 50/60Hz AC.

Connect the recorder to the wall socket.

Once switch ⑱ is pressed in, recorder is ready for use.

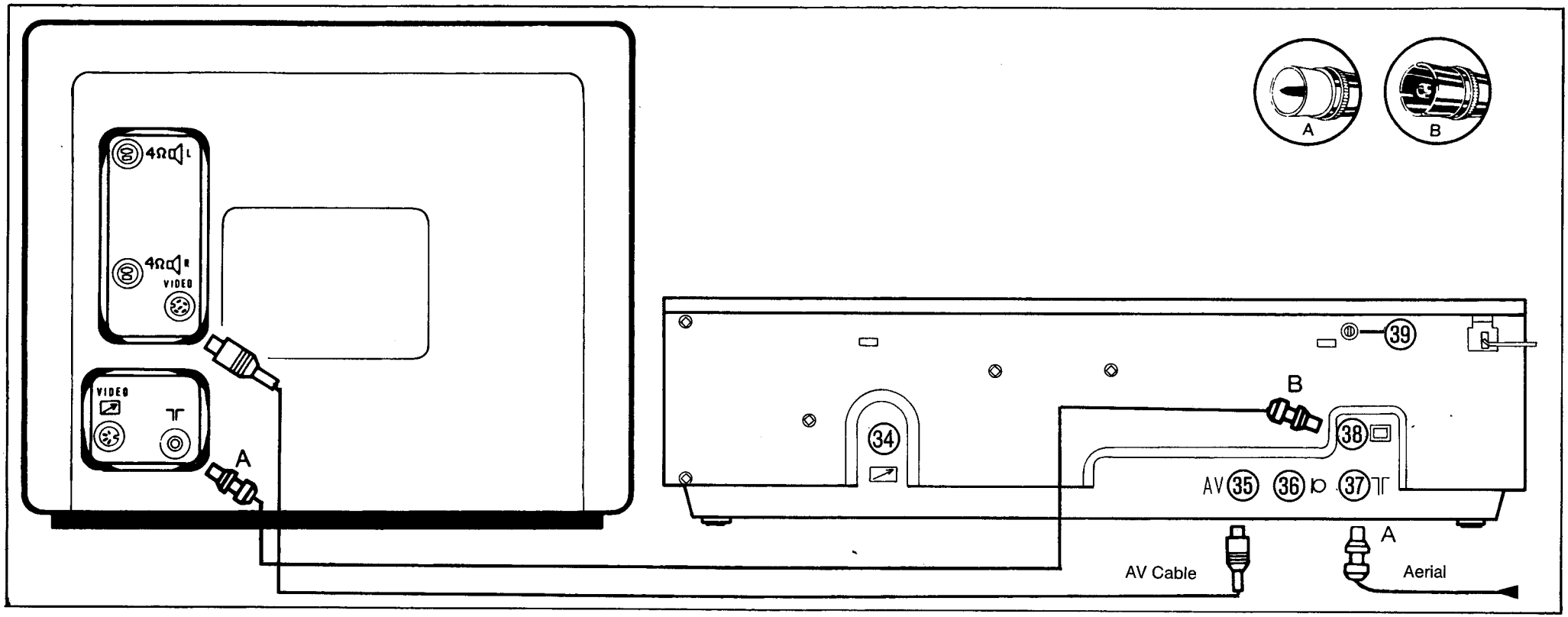
* applies only to stereo recorders

### AV Connection

- If your TV set has a DIN AV (video) socket, you will be able to obtain the **best possible** playback **picture quality** by making a **direct AV connection** between the set and the recorder.
- If you have the stereo version of the recorder, **only direct AV connection** will enable you to reproduce the recorded stereo sound in stereo; either through a stereo-sound TV set or a stereo hifi system (see page 40/41).
  Connect the AV cable to the AV socket ㉟ of the recorder and to the video (AV) socket on the TV set.
  Depending on the type of TV set, this AV connection must then be **"electronically closed"**.
  Switch on the TV set and the recorder.
  Select the **station memory number 1** on the TV set.
  Insert a **blank cassette** in the recorder.
  Press button ⑤.

  Depending on what is shown on the TV screen, proceed as follows:

1. **The TV screen shows only "flicker"**
   Press button ⑮.
   Press buttons 8, 5, 0, 5 ①
   Press button ㉑.
   Unplug the AV cable from the AV socket ㉟ of the recorder.
   As described on page 46, **the colour TV set has now to be tuned to the recorder.**
   After this adjustment has been completed, plug the AV cable back into socket ㉟ of the recorder.
2. **The picture is unchanged**
   Press button ⑮.
   Press buttons 8, 5, 0, 4 ①.
   Press button ㉑.
   In this case it is not necessary to match the TV set to the recorder (page 46).


4Ω L
4Ω R
VIDEO
VIDEO
A
B
A
34
39
38
AV 35 36 37
B
A
AV Cable
Aerial

## Tuning the TV Set to the Recorder

Your TV set has to be tuned to the recorder. For this once-off adjustment you will need a black-and-white test pattern which is transmitted by the recorder.

Proceed as follows:
Switch on TV set and select AV (VCR) position.

### Procedure

Press – button ⑳ once.

### Indication in Display ③

⇨ AV, PROG.

### Remarks

⇨ Tune the TV set to the test pattern from the recorder (around channel 36 in the UHF band) and enter it in the memory (see operating instructions for TV set).

If channel 36 is already being used by a broadcasting station in your area, you will get interference. However the frequency of the recorder can be varried between channels 30 and 40 with the channel control ㊴ on the back of the recorder (see picture on page 45).

## Tuning the Recorder to TV Stations

So that your recorder can record TV broadcasts, its receiver section must be tuned to the local TV stations or to the special channels of the local cable TV network.

### Procedure

**Tuning to TV station using the automatic station search system.**

Press + button ⑳.
Repeatedly press button ㉒ until you find the required station, and then press button ㉑.

### Indication in Display ③

⇨ 1, PROG., channel number between 0 and 99.

### Remarks

⇨ You can check whether the station received is the one you want by switching to and fro between the AV (VCR) position and the station position for the required channel on your TV set.

**Waveband coverage:**

VHF I: Channels 2-4, special channels 1, 2.

VHF III: Channels 5-12, special channels 3-25.

UHF: Channel 21-69

Select the AV (VCR) position on the TV set.

In the table below the channel numbers to be entered to receive special channels are shown.

| Special channels | Figures to be entered | Special channels | Figures to be entered |
|---|---|---|---|
| S 1 | 81 | S 14 | 94 |
| S 2 | 82 | S 15 | 95 |
| S 3 | 83 | S 16 | 96 |
| S 4 | 84 | S 17 | 97 |
| S 5 | 85 | S 18 | 98 |
| S 6 | 86 | S 19 | 99 |
| S 7 | 87 | S 20 | 00 |
| S 8 | 88 | S 21 | 74 |
| S 9 | 89 | S 22 | 75 |
| S 10 | 90 | S 23 | 76 |
| S 11 | 91 | S 24 | 77 |
| S 12 | 92 | S 25 | 78 |
| S 13 | 93 | | |

Press + button ⑳.
Repeatedly press button ㉒ until the 2nd required station is found, and then press button ㉑ (etc.).

**Tuning to stations by entering channel numbers directly.**

Press + button ⑳. ⇨ 1, PROG., channel number between 0 and 99.

**Example: Station memory number 1, channel 6.**

Press button 6 ① and button ㉑. ⇨ 1, PROG., 6.

Press + button ⑳. ⇨ 2, PROG., channel number between 0 and 99.

**Example: Station memory number 2, channel 34.**

Press buttons 3, 4 ① and button ㉑. ⇨ 2, PROG., 34.

Your recorder has 29 station memories, each of which can be tuned to any local TV station. To do this press + button ⑳ and repeat the adjustments opposite.

In areas where reception is difficult, the picture contours can be made gradually harder or softer by pressing the buttons + or − ⑲ respectively. Press the button concerned until the picture is to your satisfaction. Once this adjustment is complete, press button ㉑ again.

## Resetting the Clock

From summer to winter time or vice versa.

**Example:**
**Changing clock setting from 23:00 hours to 22:00 hours.**

| Procedure | Indication in Display ③ | Remarks |
|---|---|---|
| Press buttons 2, 2, 0, 0 ①. | ⇨ 22:00 | |
| Press button ㉓. | ⇨ Today's date, DATE, 22:00. Date disappears once button ㉓ is released. Dots between hour and minute figures will start to flash. | ⇨ After button ㉓ has been pressed the clock starts running. This is indicated by the dots flashing once a second. |

## Changing the Date

**Example:**
**Changing the date from 2.3 to 1.3**

| | | |
|---|---|---|
| Press buttons 1, 0, 3 ①. | ⇨ 1:03 | ⇨ The number of the month must always be entered as two figures. |
| Press button ㉒. | ⇨ Clock time, date (eg: 1.03), DATE. Date disappears once button ㉒ is released. | ⇨ The date can be displayed at any time by pressing button ㉒. The recorder will not accept non-existent dates (eg: 31.02). When button ㉒ is pressed the »old« date will reappear. |

# Other Facilities

Your recorder can be programmed for continuously playing back (eg: commercial spots which have been recorded on tape), or for continuously recording (eg: as monitoring system). In these operating modes, the tape will automatically be rewound to the beginning when the end is reached and the process will start again. These operating modes are cancelled by switching the unit off or by selecting another function.

| Function | Procedure | Indication in Display ③ | Remarks |
|---|---|---|---|
| Continuous playback | ⇨ Press button ⑱ and insert cassette. Press buttons 8, 5, 0, 3 ① and button ㉑. | ⇨ A 3, clock time, ▸, total playing time and time used on cassette, TAPE. | |
| Continuous AV recording (from cameras with AV connection) | ⇨ Press button ⑱ and insert cassette. Press buttons 8, 5, 0, 2 ① and button ㉑. | ⇨ A 2, clock time, REC., PROG., total playing time and time used on cassette, TAPE. | |
| Continuous HF recording (from cameras with HF connection) | ⇨ Press button ⑱ and insert cassette. Press buttons 8, 5, 0, 1 ① and button ㉑. | ⇨ A 1, clock time, REC., PROG., total playing time and time used on cassette, TAPE. | ⇨ Programme position 1 on the recorder must be tuned to the output channel of the camera. |
| If the TV picture "jumps" or "rolls" (faulty recording) when playing back cassettes **recorded on a different recorder.** | ⇨ Press numbered buttons 8, 5, 1, 1 ①, then button ㉑. | ⇨ Clock time, ▸, total playing time and playing time used on cassette, TAPE. | ⇨ Before you remove **this cassette** from the recorder, you should cancel this coding again. |
| To cancel the coding (8511). | ⇨ Press numbered buttons 8, 5, 1, 0 ①, then button ㉑. | ⇨ Clock time, total playing time and playing time used on cassette, TAPE. | |

## Specification

| | |
|---|---|
| **TV standard:** | CCIR PAL, 625 lines |
| **System:** | VHS |
| **Dimension of recorder (WxHxD):** | 496mmx134mmx313mm |
| **Dimensions of cassette (WxHxD):** | 188mmx25mmx104mm |
| **Weight of recorder:** | Approx. 11.5kg |
| **Operating position:** | horizontal |
| **Ambient temperature:** | +5° to +35°C |
| **Relative humidity:** | up to 80% |
| **Mains power supply:** | 220V AC, 50/60Hz |
| **Power consumption** | |
| **– in operation:** | Approx. 39W (44W), with camera approx. 48W (54W), max. camera load 0.5A |
| **– standby:** | Approx. 18W time displayed |
| **– switched off:** | Approx. 5W time not displayed but aerial amplifier in operation |
| **TV band coverage:** | |
| **VHF Band I:** | Channels 2-4 special channels 1, 2 |
| **VHF Band III:** | Channels 5-12, special channels 3-25 |
| **UHF Band:** | Channels 21-68 |

( ) Specification of stereo recorder

## Stop Other People Using Your Recorder Without Permission.

Your recorder is equipped with an **electronic lock** which can be used to prevent any of the functions being selected. Even a cassette which is put in after the lock is applied cannot be removed until you unlock the recorder again.

The lock can be applied and removed quite simply using any number containing from **1** to **4 digits.**

**Select a number you wish to use, then enter this personal code in the boxes opposite.**

This page can be removed and stored in a safe place.

Do not forget or mislay the code number; should this happen you will need the service of your dealer to unlock your video recorder.

## Electronic Combination Lock

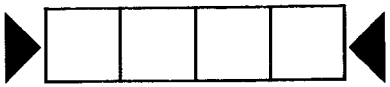
| | Procedure | Indication in Display ③ | Remarks |
|---|---|---|---|
| **To apply lock** | Press button ⑮.<br>Then enter 8, 5, 0, 0 with buttons ①. | ⇨ 85:00 | |
| | Press button ㉑. | ⇨ **0:00** | ⇨ **Recorder** is **ready** for code number to be entered.<br>If button ㉑ is pressed several times, the locking code will be 0, 0, 0, 0 (fast lock). |
| | Enter your personal **code number** with the buttons ①. | ⇨ 1-4 digit code number | ⇨ **Make a note of your personal code number.** |
| | Press button ㉑. | ⇨ A 0, clock time | ⇨ **Recorder locked.** |
| | Cassette loaded **after recorder has been locked.** | ⇨ A 0, clock time for about 30 sec., total playing time of cassette and tape time used, TAPE. | ⇨ Cassette **cannot be removed** until recorder is unlocked. |
| **To unlock recorder** | Enter **your personal code number** with buttons ①. | ⇨ A 0, your code number | ⇨ **Recorder unlocked;** all of the functions can now be selected again. |
| | Then press button ㉑. | ⇨ Clock time | |

## Schützen Sie Ihren Recorder gegen unbefugte Benutzung!

Ihr Recorder besitzt ein **elektronisches Zahlenschloß.** Damit lassen sich alle Funktionen »verriegeln«. Selbst eine Cassette, die nachträglich eingeschoben wird, muß im Recorder bleiben, bis Sie ihn wieder »entriegeln«.

Verriegeln und Entriegeln geht ganz einfach mit einer **ein-** bis **vierstelligen** Zahl.

**Tragen Sie diese persönliche Kennzahl in nebenstehendes Feld ein.**



Sie können die Seite heraustrennen und an sicherer Stelle verwahren.

Falls Sie selbst mal die Kennzahl vergessen oder verlegen, kann der Fachhändler weiterhelfen!

| Elektronisches Zahlenschloß | Bedienung | Display ③ zeigt | Bemerkung |
|---|---|---|---|
| **Zahlenschloß »verriegeln«** | Taste ⑮ drücken. | | |
| | Tasten ① 8, 5, 0, 0 drücken. | ⇨ 85:00 | |
| | Taste ㉑ drücken. | ⇨ **0:00** | ⇨ **Recorder** zur Kennzahleingabe **bereit.** Falls die Taste ㉑ öfter gedrückt wird, ist der Recorder mit 0, 0, 0, 0 »verriegelt« (Schnellverriegelung). |
| | Mit Tasten ① **eine ein-** bis **vierstellige Kennzahl** eingeben. | ⇨ ein- bis vierstellige Kennzahl | ⇨ **Ihre persönliche Kennzahl, bitte notieren!** |
| | Taste ㉑ drücken | ⇨ A 0, Uhrzeit | ⇨ **Recorder »verriegelt«.** |
| | Falls **nach dem »Verriegeln«** eine Cassette in den Recorder geschoben wird! | ⇨ A 0, Uhrzeit ca. 30 sec., Gesamtspielzeit der Cassette, abgelaufene Spielzeit der Cassette, TAPE. | ⇨ Die eingeschobene Cassette kann **nicht mehr entnommen** werden! |
| **Zahlenschloß »entriegeln«** | Mit Tasten ① **Ihre Kennzahl** eingeben | ⇨ A 0, Ihre Kennzahl | |
| | Taste ㉑ drücken | ⇨ Uhrzeit | ⇨ **Recorder »entriegelt«.** Jede Funktion kann wieder angewählt werden. |

# Fernbedienen

Richten Sie die Fernbedienung auf den Videorecorder. Jede Taste der Fernbedienung steuert die gleiche Funktion, wie die entsprechende Taste am Videorecorder.

Wenn der Recorder auf die Fernsteuerbefehle nicht mehr richtig reagiert, kann die Batterie verbraucht sein.
Sie können die Batterie selbst austauschen. Zum Abnehmen des Batteriefachdeckels Schnapper drücken.
Batterie: 9-V-Block, IEC 6F 22.
Verbrauchte Batterien sind unbedingt zu entfernen. Für Schäden, die durch ausgelaufene Batterien entstehen, kann nicht gehaftet werden.

### Fernsehgerät ohne Fernbedienung

Hat Ihr Fernsehgerät keine Fernbedienung, so können Sie jetzt mit der Fernbedienung des Videorecorders das »Fernsehprogramm drahtlos umschalten«.

Gehen Sie so vor:

- Fernsehgerät einschalten, AV-Programmplatz wählen.
- Mit den Tasten **P+** oder **–P** wählen Sie das gewünschte Fernsehprogramm.
  Im Anzeigefeld des Recorders werden Programm und dazugehörige Kanalzahlen angezeigt.

**DOPPELFUNKTIONSTASTEN 1...0**
Zur Eingabe der Programmnummer bei Aufnahme, sowie der Ziellaufzeit.

rückwärts **BILDSUCHLAUF** vorwärts

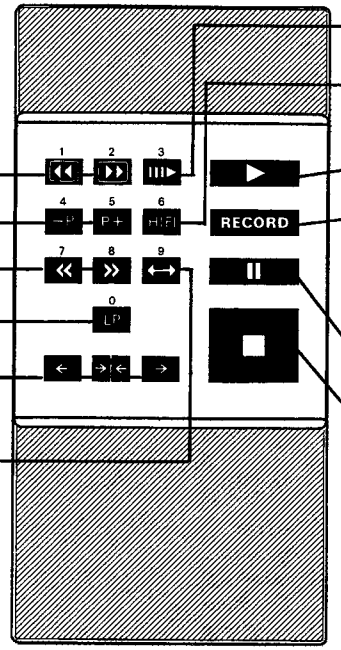
abwärts **PROGRAMMWAHL** aufwärts

**RÜCKLAUF VORLAUF**

**STANDARD-/LANGSPIELBETRIEB**
(ohne Funktion)

**SPURLAGETASTEN**
links, Mitte, rechts

**ZIELLAUF**
Taste ⟷ drücken,
dann mit den Doppelfunktionstasten **1...0** die Ziellaufzeit **dreistellig** – in **Stunden** und **Minuten** – eingeben.




**ZEITLUPE**
(ohne Funktion)

**HIFI**
(ohne Funktion)

**WIEDERGABE**

**AUFNAHME**
Taste RECORD drücken,
dann Programmplatz zweistellig eingeben (z.B. für das 2. Programm die Doppelfunktionstasten **0** und **2** drücken).

**AV-Aufnahme**
Taste RECORD drücken,
dann Doppelfunktionstaste **0 zweimal** drücken.

**PAUSE/STANDBILD**

**STOP**

# Remote Control

Point the remote control handset to the video recorder.

Each button on the remote control controls the same function as the respective button on the video recorder.

When the recorder does no longer respond to the remote control commands, the battery may be exhausted.

You can replace the battery by yourself. To remove the cover of the battery compartment press down the catch. Insert a new battery, type IEC 6F 22, 9 V.

It is absolutely necessary to remove exhausted batteries from the set. No responsibility will be taken for damages caused by a leaking battery.

**TV receiver without remote control**

If your TV receiver is not provided with a remote control facility, the remote control of the video recorder permits to remotely select the desired program of your TV receiver.

To do so, proceed as follows:

- Switch on TV receiver and select AV program position.
- Select the desired TV program with the button **P+** or **– P**. In the display field of the video recorder the selected program and the allocated channel number will be indicated.

**DUAL FUNCTION BUTTON 1...0**
For entering the station position number for recording and the GO-TO time.

reverse **PICTURE SEARCH** forwards

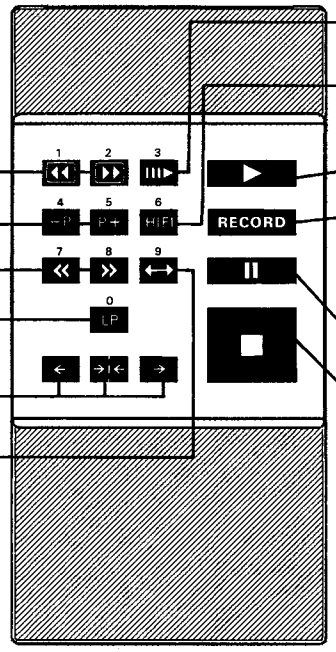
down **STATION CHANGE** up

**REWIND/FORWARD WIND**

**STANDARDPLAY/LONGPLAY**
(No function on this recorder).

**TRACKING BUTTON**
left, centre, right

**GO TO**
Press ⟷ button.
Enter required GO-TO time as **3 figures** in **hours** and **minutes** using the numbered buttons **1** to **0** on the video remote control handset.




**SLOW MOTION**
(No function on this recorder).

**HIFI**
(No function on this recorder).

**PLAYBACK**

**RECORD**
Press RECORD button.
Enter required station number as **2 figures,** eg: **0, 2** for station position 2.
The recorder will start recording.

**AV Recording**
Press RECORD button,
then **press "0" button twice.**
The recorder will start recording.

**PAUSE/FREEZE FRAME**

**STOP**

**Notizen/Space for notice:**

# Fernbedienen

**mit dem Telepilot Ihres GRUNDIG Farbfernsehgerätes.**

Sie können Ihren Video-Recorder drahtlos fernbedienen.

Für alle Fernbedien-Befehle richten Sie den Tele-Pilot auf das Infrarotauge ㉝ des Recorders.

Entnehmen Sie der Tabelle, welche Tasten dazu am Fernseh-Telepilot gedrückt werden müssen.

Es gibt einen GRUNDIG Fernseh-Telepilot, damit lassen sich **zwei Videorecorder** (VS 200/ VS 220 RC) **abwechselnd** fernbedienen.

**Fragen Sie Ihren Fachhändler!**

**Taste** [AV] (am Telepilot) **drücken und halten.** Hierdurch wird der Telepilot **von Fernseh-Fernbedienung auf Recorder-Fernbedienung umgeschaltet.** Danach **zusätzlich** durch **Drücken folgender Tasten** die gewünschten Recorderfunktionen starten.

| Taste am Telepilot | Recorderfunktion |
|---|---|
| **Programmtaste 1** | **Bildsuchlauf rückwärts** |
| **Programmtaste 2** | **Bildsuchlauf vorwärts** |
| **Programmtaste 4** | **Progr.–** } (siehe Anmerkung a.) |
| **Programmtaste 5** | **Progr.+** } |
| **Programmtaste 7** | **Rücklauf** |
| **Programmtaste 8** | **Vorlauf** |
| **Programmtaste 9** | **GO TO (Ziellauf)** (siehe Anmerkung b.) |
| **Lautstärke** ◣ +, – | **Spurlage (Tracking)** +, – |
| **Farbk.–** ◑ | **Aufnahme** (siehe Anmerkung c.) |
| **Farbk.+** ◑ | **Stop** |
| **Helligk.–** ☼ | **Pause** (Standbild/Einzelbildfortschaltung) |
| **Helligk.+** ☼ | **Wiedergabe** |

***Beim Telepilot 160 E drücken Sie anstatt der Programmtaste 0 die Programmtaste 16.**

**Anmerkung a.**

- Fernsehgerät auf AV-Programmstellung schalten.
  Das angewählte Programm des Recorders sehen Sie am Bildschirm des Fernsehgerätes.

**Anmerkung b.**

Taste [AV] drücken und halten.

Programmtaste **9 nur einmal** drücken **(Anzeige im Display ③ 0:00).**

Mit den Programmtasten **1** bis **0*** des Telepilots die Ziellaufzeit **(dreistellig, in Stunden und Minuten)** eingeben.

Beispiele:

Ziellaufzeit 48 Minuten; Tasten **0* 4 8** drücken,
Ziellaufzeit 90 Minuten; Tasten **1 3 0*** drücken.

**Anmerkung c.**

- Zum Aufnehmen des Programmes am Telepilot folgende Tasten nacheinander drücken:
  Taste [AV] drücken und halten.
  Taste »Farbk.–« (Aufnahme) drücken.
  Mit den Programmtasten **1** bis **0*** eine **zweistellige** Programmzahl eingeben.
  Beispiel: Für das 2.Programm die Tasten **0*** und **2** drücken.
  Bei AV-Aufnahmen **0***, **0*** drücken.
  Nach Eingeben des Programmes startet der Recorder die Aufnahme.
- **Aufnahme – Pause:**
  Taste »Helligk.–« drücken.
  Taste »Helligk.–« nochmals drücken, die Aufname wird fortgesetzt.

# Remote Control

**This recorder can be remotely controlled with the remote control handset of your GRUNDIG TV set.**

To operate the recorder by remote control always point the TV remote control directly at the infrared receiver ㉝ of the recorder.

The table shows which buttons on the TV remote control must be pressed for remotely controlling the video recorder.

There is another GRUNDIG remote control unit which allows **two video recorders** (VS 200/ VS 220 RC) to be remotely controlled **alternately.**

**Consult your dealer.**

**Press** the button marked [AV] (on the television remote-control) **and hold it down.** The remote control **now operates the recorder instead of the TV set.** Then select the required recorder function by **pressing one of the following buttons:**

| Remote Control Button | Recorder Function |
|---|---|
| **Station button 1** | **Picture search, reverse** |
| **Station button 2** | **Picture search, forwards** |
| **Station button 4** | **Station change downwards (–)** (see note a.) |
| **Station button 5** | **Station change upwards (+)** (see note a.) |
| **Station button 7** | **Fast rewind** |
| **Station button 8** | **Fast forward wind** |
| **Station button 9** | **GO-TO** (see note b.) |
| **Volume** ◣ +, – | **TRACKING** +, – |
| **Colour** – ◑ | **Record** (see note c.) |
| **Colour** + ◑ | **Stop** |
| **Brightness** – ☼ | **Pause** (Freeze frame/frame advance) |
| **Brightness** + ☼ | **Playback** |

*** Tele-Pilot 160 E: for 0 press numbered button 16.**

**Note a.**

- Select AV (VCR) position on TV set.
  You will now see the picture being broadcast by the station selected on the recorder on the screen of the TV set.

**Note b.**

Press [AV] button and hold it down.

Press the station button **9 once only (display ③ shows 0:00).**

Enter required GO-TO time as **3 figures in hours and minutes** using the numbered buttons **1** to **0*** on the remote control handset, eg: for a GO-TO time of 48 mins. press the buttons **0* 4 8** or for a GO-TO time of 90 mins. press the numbered buttons **1 3 0***.

**Note c.**

To record a programme the following buttons should be pressed one after the other:

Press button marked [AV] and hold it down.

Press "colour –" (record) button.

Enter required station number as **2 figures** using the numbered buttons **1** to **0***, eg: **0*** and **2** for station memory 2.

For AV recordings press **0***, **0***.

Recording starts once the station has been entered.

**Pause on record:** Press "brightness –" button.

Press this button a second time to restart recording.

# Accessories

**Accessories Supplied:**

Aerial Connecting Cable
Video Cable VK 1 (only VS 220/VS 226)
Microphone GCM 226 (only VS 226)
Video Remote Control
Code Label

**Optional Accessories Available:**

GRUNDIG VHS Cassettes
E 120 "High grade"
E 180 "High grade"
E 240 "High grade"
Code Label SAS 1
Video Cable VK1
Video Stand VF 2
Video Remote Control Cable VFK 30
Colour Video Camera FAC1740H, FAC12AF
Camera Tripod CST 2
Camera Tripod Trolley CSW 2
Video Fan-cooled Lighting Unit VGL 1000
Camera Remote Control Adapter CFA 1804
Video/Hifi Adapter 4850